TRANSPORT
AND
THE PLAN

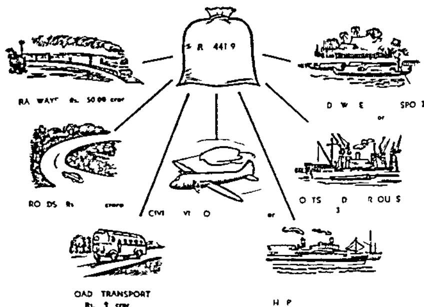


THE PUBLICATIONS DIVISION
Ministry of Information and Broadcasting
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ANNAS EIGHT

CONTENTS

EXPENDITURE ALLOCATIONS ON TRANSPORT IN THE FIVE YEAR PLAN



The Plan has been expanded recently and additional programmes involving an expenditure of Rs 150 to Rs 175 crore during the period of the Plan have been approved This amount includes Rs 10 crore for the development of roads

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CHAPTER I

INTRODUCTION

The means of transport are a nation's life-lines Obviously an efficient and well-developed system of transport is indispensable for economic and industrial progress especially when the distances are as great as they are in India By and large, India's transport system is inadequate in comparison with her requirements and also not sufficiently balanced The Five Year Plan, therefore envisages a co-ordinated development of rail, road sea and air transport

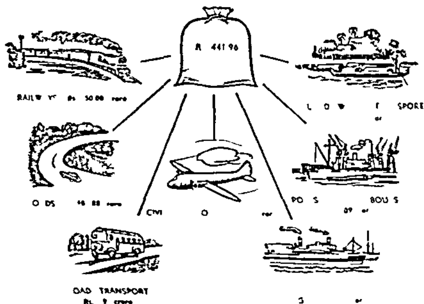
The pattern of the transport system will also undergo substantial changes as agricultural and industrial programmes under the Plan are progressively implemented Broadly speaking the cumulative effect of the Plan will be to increase the overall demand for transport facilities The Government's plans for transport thus hold a very important place in the whole development programme and considerable outlay has been planned on the expansion of railways roads shipping and other means of transport

Out of the total outlay of Rs 2,069 crore envisaged in the Plan Rs 441 96 crore are provided for the development of transport This is distributed as follows

	(Crores of rupees)
Railways	250 00*
Road	103 88
Road transport	8 97
Civil aviation	22.87
Shipping	18 05
Ports and harbours	33 09
Inland water transport	0 10
Total	441 96

*This excludes Rs 150 crore for current depreciation of railway installations and equipment.

EXPENDITURE ALLOCATIONS ON TRANSPORT IN THE FIVE YEAR PLAN



The Plan has been expanded recently and additional programmes involving an expenditure of Rs 150 to Rs 175 crore during the period of the Plan have been approved This amount includes Rs 10 crore for the development of roads.

CHAPTER II

RAILWAYS

THE principal means of land transport in India are the railways They cover a network of 34 123 miles and operate as the single biggest nationalized undertaking in the country They are also the largest in Asia and are now, more than in the past, playing a vital part in the social and economic life of the people The investment on the railways exceeds Rs 800 crore and the men employed number nearly a million

The Indian railways suffered heavily during the last two decades As a result of the world wide economic depression in the early thirties, there was a heavy fall in the railway earnings In consequence the expenditure on maintenance was slowed down or deferred

The railways were just emerging from the depression in 1937 and were attempting to make the arrears good when World War II broke out in 1939 Six years of war imposed a heavy strain on the assets of the Indian railways Spares were not readily available and repairs and replacements fell into heavy arrears Operating efficiency was therefore adversely affected Partition brought further strain on the railways

With the advent of independence the various schemes for the economic development of the country received a fresh impetus A large number of nation-building activities which included multi purpose hydro electric and irrigation projects were undertaken These involved the transport of large quantities of heavy equipment and demand on the railways were further increased

THE PROBLEM OF REHABILITATION

The most serious problem facing the railways is the task of rehabilitation and provision of adequate equipment The magnitude of the problem may be judged from the abnormal proportion of overage stock The arrears of renewals accumulated by March 31 1951 amounted to 1 050 locomotives 5 514 coaching vehicles and 21 418 wagons against the average normal renewals of 190 locomotives 650 coaching vehicles and 5 000 wagons per annum By March 31 1956 the stock requiring replacement has been estimated at 2 092 locomotives 8 535 coaches and 47 533 wagons

Furthermore there is the problem of rehabilitating the track which had also deteriorated considerably Speed has had to be restricted over several thousands of miles of track on account of its weak condition

At the same time provision has to be made for increased levels of traffic as a result of progressive industrialization development of major projects and increased production in many fields of industry like coal sugar and jute This upward trend of traffic is already more or less in evidence

Finally more amenities have to be provided at railway stations and in the trains particularly for passengers travelling by third class

Thus the railways have to take into account the problem of (i) rehabilitation and replacement (ii) increased traffic and (iii) amenities for passengers The primary task of the railways is however to overtake the heavy accumulation of arrears

THE RAILWAY PLAN

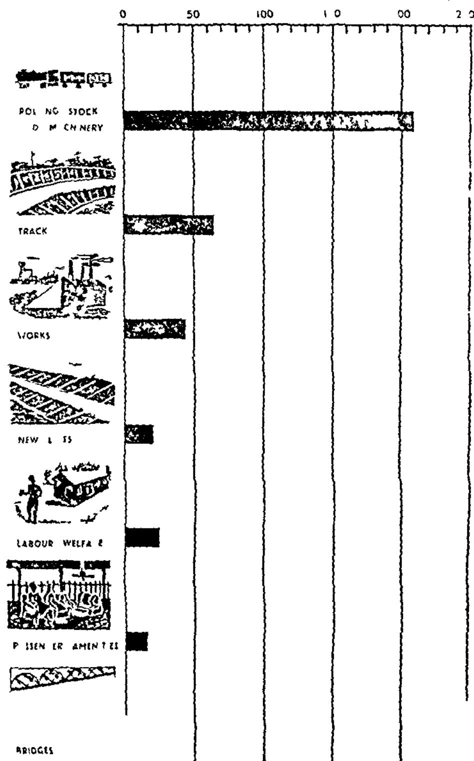
The Five Year Plan provides for an expenditure of Rs 400 crore for the five year period Of the aggregate Rs 250 crore will be spent on the rehabilitation and development and Rs 150 crore to cover the current depreciation of railway installations and equipment A number of

branch lines which had been dismantled during the war, have to be relaid Moreover, about Rs 15 crore have been set apart for the provision of greater comforts for third class passengers A sum of Rs 20 crore has also been earmarked for the opening of new lines

THE RAILWAY PLAN

DEVELOPMENT EXPENDITURE ON MAJOR ITEM FOR 19 1 56

OUT OF A TOTAL APPROPRIATION OF R 400 CRO



Out of Rs 400 crore Rs 320 crore will be raised by the railways from their own resources while Rs 80 crore will come out of the Central revenues A further provision of Rs 50 crore has been made in the Plan for the expansion of basic industries and ancillary transport and the railways will obtain a further allocation out of this amount

ACHIEVEMENTS

During the two years since the Plan came into operation steps have been taken towards the implementation of the various proposals drawn up under the Five Year Plan

Rolling Stock—Apart from importing essential requirements from abroad arrangements have been made to enable the railways to become increasingly self sufficient in regard to the supply of rolling stock

To this end the Chittaranjan Locomotive Works the largest of its kind in Asia has been established by the Government at a cost of Rs 15 crore for *the construction* of locomotives The Government have also extended financial assistance to the Tata Locomotive Engineering Company by holding shares to the value of Rs 2 crore While the eventual production at Chittaranjan is expected to be 120 locomotives and 50 boilers per annum it is expected to supply 268 locomotives during the period of the Plan In addition about 170 locomotives are expected to be manufactured by the Tatas

It is planned to place 1 038 locomotives on the line during 1951-56 of which 438 are to be produced in the country and 600 to be imported Orders have already been placed for 769 locomotives against the programme for the first three years i e 407 from within the country and 362 from abroad Up to the end of September 1953 as many as 447 locomotives had been received—128 from within the country and 319 from abroad During the same period 8 locomotives had been manufactured at Chittaranjan and 48 by the Tata Locomotive Engineering Company

The domestic production of coaches was 238 in 1948-49

337 in 1949-50 and 479 in 1950 51 The estimated output of domestic production during the period of the Plan is 4,380, in addition to 637 coaches to be imported In the first two and a half years of the Plan, 1,751 coaches were built in the country and 307 imported

With a view to supplementing home production, the construction of a new factory for coaches was begun at Perambur in Madras in June 1952 The factory, which is expected to cost Rs 4 crore, will produce every year 350 light-weight integral type of coaches made entirely of steel It will further serve to increase the production of passenger coaches internally to over a thousand a year

As regards wagons, internal production was 2 520 wagons in 1948 49, 1,095 in 1949 50 and 2,924 in 1950 51 It is estimated that, during 1951-56, 30,000 wagons will have been produced at home The production during the first two and a half years was 13,754 wagons During the same period, 7,530 wagons were imported so that the number of new wagons received by the railways was 21,284 Recently, plans have been finalized to increase wagon manufacture in the country progressively until a level of about 12,000 wagons per annum is reached in 1956

The Track—The progress in regard to the replacement of track and other immobile equipment is difficult to state in physical terms Satisfactory progress has, however, been made in this regard

Meanwhile, the maximum use is being made of internal capacity for the production of track material During 1949 50 Class I railways purchased 2 3 million wooden sleepers at a cost of Rs 3 90 crore In addition, they purchased over 8 lakhs of cast iron and over 6 lakhs of steel sleepers Purchases during 1951-56 are anticipated to be of the same order

In order to utilize internal resources fully, it is proposed to use half round sleepers for the metre gauge and narrow-gauge lines Also, the treatment of timber to prolong the life of sleepers is expected to be done in many more new centres At the same time, provision has been

made for the setting up of two new depots for creosoting timber at Clutterbuckganj and Coimbatore in addition to those already in existence in Dhilwan in the Punjab and Naharkatiya in Assam

New Lines—A number of new projects have been undertaken by the railway authorities to meet the growing agricultural and industrial demands Among the more important works completed during the past two years mention may be made of the opening of the Deesa Gandhi dham section of the Western Railway and the Bijnor Chandpur Siau section of the Northern Railway

The Vasad Kathna line on the Western Railway has also been completed Work is in progress on the Quilon Ernakulum metre gauge line on the Southern Railway and the rail *cum* road bridge over the Ganga near Mokameh When completed the latter will provide a much needed rail link across the Ganga

The restoration of dismantled lines is another pressing need Considerable progress has also been made in this direction

Also a sum of Rs 1 89 crore has been provided for the purchase of Barsi Light Railway Further the survey of Bhavnagar Tarapur line in Saurashtra and the reconnaissance surveys of a broad gauge line to Indore in Madhya Bharat and between Barabil and Sambalpur in Orissa were taken in hand in 1952 53 and are almost complete In addition surveys are under way during the current year for several other projects

At the same time special attention was paid to the removal of bottlenecks in the movement of traffic on the Bezwada Madras section This will increase the line capacity to 4 0 wagons per day and also help to clear up one of the major difficulties of the railways

Moreover a few lines of a developmenta character have been taken in hand Special mention may be made of the following works with a view to expanding iron and steel production and establishing petroleum refineries (i) the doubling of Anara Goychandi Pahar Burnpur section

at a cost of Rs 139 3 lakh, (ii) the doubling of Sini-Gomaharria section at a cost of Rs 47 5 lakh, and (iii) the provision of additional yard facilities (Jugsulai Yard) at a cost of Rs 13 lakh

Finally, rail facilities are being provided for the oil refineries at Kurla-Trombay at an estimated cost of Rs 65 lakh, while the movement of gypsum to the Sindri Fertilizer Factory is being expedited at an estimated cost of about Rs 11 26 lakh Of these two schemes, the expenditure during 1952 53 amounted to Rs 6 lakh and Rs 10 11 lakh respectively

Passenger Amenities—Special priority has been given to improve amenities for passengers, particularly those travelling by third class A sum of Rs 15 crore has been provided for this purpose for the five-year period

Already a beginning has been made in this matter For instance the number of ticket windows has been increased at many stations throughout the country To alleviate the irksomeness of waiting, the railways have installed overhead electric fans and appointed social workers to regulate the crowds and assist passengers in other ways Waiting halls at big stations have also been provided with an adequate number of electric fans and benches One of the latest additions to the amenities for the travelling public is the supply of cold water during the hot weather at important stations

Additional facilities have been provided for third class passengers travelling long distances For instance, passengers travelling 300 miles and above can now purchase tickets at special windows have separate compartments to themselves can get the guard to telegraph ahead for meals and have conductors to attend to them throughout their journey Women passengers are looked after by lady social workers An increasing number of "People s Expresses" for the use of third class passengers are being introduced between important centres of trade and commerce The trains have light loads and improved coaches and there has been an improvement in speed

At the same time the interior of third class coaches is being improved and many of these now have washable floors more leg room wider seats and other conveniences Some of the coaches of the latest type are fitted with electric fans and a sufficient number of sleeping berths

The standards of cleanliness both in the coaches and on the station premises have been improved by strengthening the sweeping and cleaning staff while the system of resident conductors has been extended to all the railway systems

Measures have also been adopted to deal with overcrowding The passenger train miles increased from 93 millions in 1948-49 to 105 millions in 1951-52 Between April 1 1952 to January 1 1953 109 new trains were introduced and the runs of 108 trains extended involving a net increase in the daily passenger train miles of 9 850 Of this 5 483 were on the broad gauge 4 210 on the metre gauge and 157 on the narrow gauge

An increasing attention is being paid to the efficiency of performance Recently the Railway Board has set up an Efficiency Bureau in order to ensure the maximum possible utilization of its stock

CHAPTER III

ROADS

ROADS are another important means of transport in India The Government have drawn up plans which aim at creating a better, richer and happier India by improving agriculture, promoting industries, mechanising transport and developing irrigation and power Roads have a vital role to play in this gigantic task of national reconstruction

The total mileage of roads in India, as is well known, is far short of the country's requirements India has over 230,000 miles of roads, i e, on an average only 19 6 miles of roads per 100 square miles of area This indicates roughly the vast leeway she has to make up in road building

Moreover, the Indian road system is unbalanced For instance the trunk roads are as a whole much more developed than the roads in the districts and villages Thus, although many fertile tracts of land are well served by rivers and are potentially rich in agricultural wealth they remain undeveloped for want of roads Indeed, a large number of villages are not linked by road with any town, market or railway station

Also most of the rural roads are fair weather roads With the arrival of the monsoon they are turned into mud and pools of dirty water and are rendered unusable And as there are few permanent bridges each *nullah* becomes an insurmountable obstacle during the rainy season

Obviously, therefore India requires more roads and an improvement of the existing ones She needs more bridges

too for a good road loses its value if some unfordable river or stream lies across it

THE NAGPUR PLAN

The Nagpur Road Plan of 1943 which called for an increase of road mileage from 265 000 to 400 000 and an improvement of the existing roads reflected this need The Plan visualized the growth of a network of road communications at a cost of Rs 372 crore within ten years The programme however has had to be drastically reduced owing to a shortage of money material and trained personnel

According to the Plan the roads were classified into four categories namely national highways State highways district roads and village roads The 13 400 miles of national highways are the main cross country roads The State highways are the main arteries of commerce within the States Then there are the district roads and village roads carrying the traffic into the interior and serving the needs of rural areas by linking them with the railways and the highways The Central Government are responsible for national highways The other roads are looked after by the States

Up to the end of 1950 51 110 miles of new roads 10 large bridges and numerous smaller bridges had been constructed on national highways and 1 000 miles of roads improved

THE ROAD PLAN

The Five Year Plan provides for the construction of 925 miles of new roads and 68 large bridges besides a number of smaller bridges In addition about 3 000 mile of roads will be improved Of this programme about two thirds will be completed by 1955 56

The Plan has earmarked Rs 27 crore for the national highways Rs 6 84 crore for roads in the Andamans Sikkim and the North East Frontier Agency areas and for certain selected roads and Rs 21 15 lakh for the establishment of a

Central Road Research Institute for the study of technical problems relating to roads and their construction

The State roads are, at present, partly financed by the State Governments and partly by grants and allocations from the Central Road Fund According to the schemes drawn up in the States, the length of metalled roads will increase from 10,007 miles in 1950 51 to 12 453 miles by 1955-56 in Part A States and from 7,588 miles to 8,129 miles in Part B States The plans for the development of roads in Part C and Part D States and in the tribal areas have been framed with a view to constructing as many new roads as possible to open up inaccessible areas The total provision for the road development in the States is Rs 75 53 crore out of which Part A States account for Rs 50 59 crore, Part B States (excluding Jammu and Kashmir) Rs 18 27 crore and Part C States Rs 6 67 crore

Recently, the Government of India have approved of special grants aggregating Rs 10 crore being made to the States for the development of roads of inter State importance or which may help to the economic advancement of the backward territories The State Governments have been asked to send their proposals which they would like to finance from such grants

Special attention is also being paid by the State Governments to the maintenance and construction of village roads In certain States for example, they are already being developed with the active co operation of the villagers themselves The Roads Wing of the Ministry of Transport has formulated a model scheme on co operative basis, for which Rs 60 lakh will come out of the Central Road Fund Reserve for specific projects spread over a period of three years from 1953-54

Financial assistance has also been offered to the State Governments to popularize the use of tyred bullock cart wheels to reduce the harmful effects on the road surface Meanwhile, the Central Road Research Institute has been entrusted with the task of evolving a suitable design for the axle system of bullock cart wheels

Finally the development of roads has also found a place in the community development projects It is estimated that 16 000 to 17 000 miles of *kutcha* roads will be constructed in the village units as part of these projects

ACHIEVEMENTS

Out of Rs 27 crore set apart in the Plan for the development of national highways for the five year period Rs 8 19 crore were for 1951 53 About Rs 6 83 crore of this amount was expended during the first two years of the Plan

During the Plan period 975 miles of new roads were planned for construction and 3 000 miles of the existing roads for improvement Of these 640 miles and 2 500 miles respectively are to be completed During 1951 53 about 190 miles of new roads have been constructed and 750 miles improved The building of additional 450 miles as well as the improvement of 1 500 miles of national highways is in progress

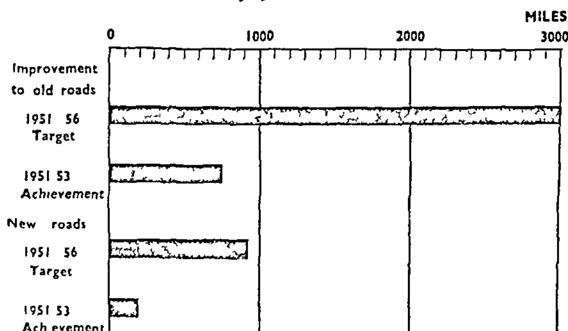
Moreover out of the 6[illegible] large bridges planned for the five year period 40 are to be completed During 1951 53 10 bridges have been completed and another 20 are under construction

Among the important projects in progress on the national highways mention may be made of the construction of the Calcutta Siliguri road the Hindustan Tibet road beyond Narkanda and up to Chini the Pennar bridge on the Madras Calcutta road the Palar bridge on the Madras Dindigul road in Madras the Mahanadi bridge at Arang in Madhya Pradesh and the Brahmani Baitarni and Subarnarekha bridges in Orissa on the Bombay Calcutta road A bridge across the Chambal river on the Agra Bombay road has also been designed and sanction accorded to its construction

A sum of Rs 6 84 crore has been provided in the Plan for the development of certain selected and other roads By the end of 1952 53 about Rs 140 5 lakh had already been spent on these roads Nearly 178 miles of new construction

NATIONAL HIGHWAYS





BRIDGES

1951 56 Target



68

1951 53 Achievement



10

and one major bridge have also been completed, while work on another 233 miles and on two major bridges is in progress

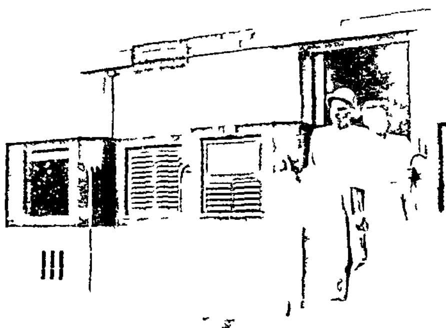
The new constructions and improvements in the States were of the order of 3,300 miles in 1951-52 and 3,900 miles in 1952 53 In financial terms, as against a total planned expenditure of Rs 75 53 crore for five years, the

expenditure has been Rs 11 29 crore in 1951 52 and Rs 16 73 crore in 1952 53

The Central Road Research Institute at Okhla in Delhi was formally opened on July 16 1952 It conducts research on road engineering in its various aspects Technical advice is given to the States on several problems connected with road works

Finally steam and diesel road rollers are being manufactured in the country and the foreign exchange requirements for the purchase of machinery for road development have accordingly been considerably reduced Messrs Jessop and Co of Calcutta have manufactured 475 diesel road rollers while Messrs Tata Engineering and Locomotive Co Ltd are about to complete the manufacture of 950 steam rollers The possibility of the manufacture of stone crushers in the country is also being examined

A W G locomotive being built at Chittaranjan Locomotive Work



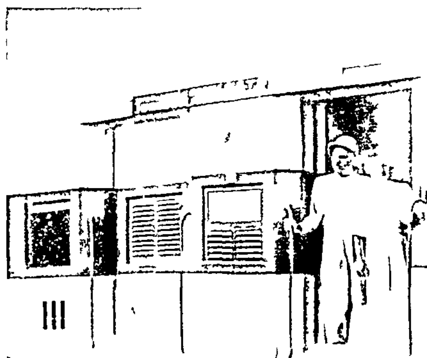
New class III railway coach built by Hindustan Aircraft Ltd

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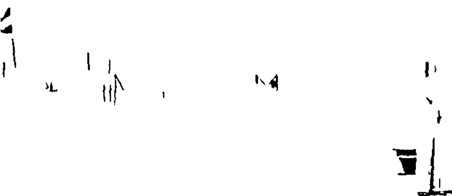
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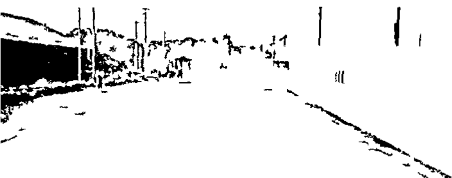
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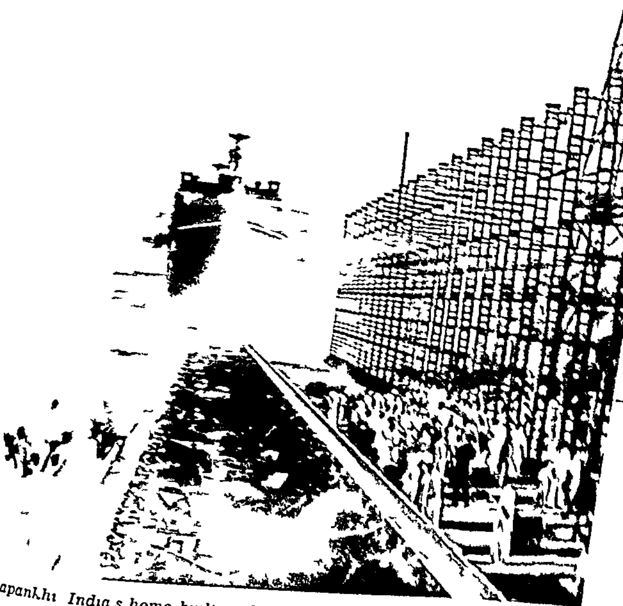


The C ntral Road Research I stitute Delhi



Steam oad oll s b ilt by Tata L comotive Engi eeri g Co Ltd
Jamshedpur

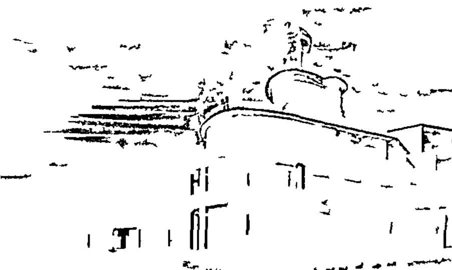




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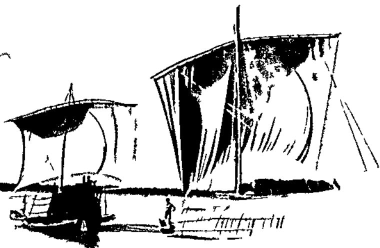
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CHAPTER IV

ROAD TRANSPORT

THE surplus military vehicles after World War I made the growth of public road transport services possible in India This led to rate cutting among the private bus operators *inter se* and between the road and rail transport agencies The result was that by 1930 the large diversion of passengers from the railways to roads caused considerable loss to the railways The Motor Vehicles Act of 1939 was an offshoot of this untoward development The object of the Act was to create fair conditions of competition as well as to enable road transport to expand along sound lines

The next significant stage in this evolution was reached in 1946 with the acceptance of the policy to encourage the formation of transport undertakings on a tripartite basis, namely, private operators the State Governments and the railways The latest development in this connection is the setting up of statutory corporations by certain State Governments under the Road Transport Corporation Act 1950

At present, there are about 47,475 operators of commercial motor transport in India Of these more than 46 000 are small operators, each owning not more than five vehicles The Government owned services are also run in as many as 20 States

The total investment on public road transport services in the country exceeds Rs 20 crore It is made up of contributions from the State Governments, the railways and private operators

Under the Five Year Plan the States propose to invest Rs 8·97 crore during 1951-56 on the development of road transport. The amount will be spent *inter alia* on (i) the purchase of about 2,000 transport vehicles and (ii) the establishment of up-to-date workshops for the maintenance and repair of transport fleets. *The training of operatives* is also envisaged.

With a view to ensuring autonomy and efficient administration the Planning Commission has recommended the setting up of corporations wherever road transport services are run by the State. The Road Transport Corporation Act, 1950 has been passed with this object. Statutory corporations have already been formed in Bombay, Delhi and Bilaspur. The Act has now been extended to Bihar, West Bengal, Madhya Pradesh, Saurashtra, Kutch and Mysore States to enable them to set up similar corporations.

In order to secure effective co-ordination between road and rail transport, it has now been decided to merge the *financial interests* of the railways and the large road transport undertakings. The railways have thus made a total contribution of Rs. 3·08 crore towards capital outlay of such undertakings in Bombay, Madhya Pradesh, the Punjab and Orissa, the share of the State Governments being Rs. 6·63 crore. The Governments of Uttar Pradesh, Bihar, Mysore, Hyderabad, Saurashtra and Kutch have also invited the railways for similar participation.

CHAPTER V

CIVIL AVIATION

THE Five Year Plan also visualizes developments in certain relatively new lines of transport of which civil aviation is one India's vast territory and favourable climate offer ideal conditions for air transport Lying across the air route between Europe and the East she also commands a key position in international air transport Already, civil aviation has played a vital role in times of emergency The evacuation of displaced persons from Pakistan after the partition, the carrying of troops ammunition and rations to Kashmir and the organization of relief operations in Assam after the earthquake and floods are some notable examples

Flying began in India as early as 1911 and received a great impetus during World War II At the call of aviation thousands joined the Royal Indian Air Force The latest types of machines and equipment were put into use new services were opened and their frequency was increased Equally important was the construction of hundreds of new aerodromes and the organization of a network of air routes Moreover, with flying becoming safer with improved technique and radio communications the advantages of air transport were brought home to the people

Thus by the end of the war flying became firmly established as an efficient means of transport Disposal aircraft were available in large numbers at reasonable prices In consequence a number of aviation companies were formed to operate air transport The volume of

passenger and freight traffic in the country increased rapidly

All was not well however from the financial point of view There were too many companies engaged in air transport for economic and successful working Indeed their financial position was far from satisfactory The need for Government intervention thus became increasingly urgent

DEVELOPMENT PLAN

The plan for the development of civil aviation has two aspects The first relates to the building of new aerodromes and the provision of facilities for meeting the requirements of increased traffic the second to the reorganization of the air transport industry

In regard to the first Rs 1 85 crore have been allotted as capital expenditure per annum for the first two years while the total allotment for the remaining period of three years is Rs 9 67 crore A large percentage of this amount will be spent on works and the rest on the procurement of equipment

As regards the second the Plan has set aside Rs 9 5 crore for the purchase of 13 aircraft and for the payment of compensation to the air companies for acquiring their assets If the existing air companies however agree to take up shares in the corporations the amount needed will be Rs 6 5 crore

ACHIEVEMENTS

As regards the building of new aerodromes though delays have occurred in the acquisition of land and the procurement of technical equipment fair progress has been recorded during 1951 53 Almost all the works undertaken have been completed Meanwhile a number of new aerodromes have been built and the existing ones improved These include the construction of four landing strips each

in the States of Tripura and Assam and a new aerodrome at Mangalore, the construction and improvement of runways and taxi tracks at Dum Dum Palam Gauhati and Bagdogra, the installation of obstruction lights on hill tops at Santa Cruz, the provision of ground lighting facilities at Dum Dum and of a terminal building at Nagpur In addition, two new aeronautical communication service stations were opened at Mangalore and Kanpur (civil), besides the area meteorological broadcast centre at Bombay to meet the requirements of the Middle East region

Among the works in progress, mention may be made of the construction of administrative technical and residential buildings at a large number of aerodromes, of terminal buildings at Santa Cruz, Bagdogra and Gauhati of transmitting stations at Lucknow Allahabad and Gauhati and of the sinking of Tulsi pipe lines and the diversion of trolly track at Santa Cruz

At the same time, ground facilities were provided during the first two years for the operation of air services and the equipping of the aerodromes to standards prescribed by the ICAO Air traffic control services navigational aids air ground and point to point radio communications are now available throughout India A network of radio beacons, radio ranges and radio direction finding stations are also at the service of the pilots for reliable and safe navigation At important aerodromes instrument landing system has been installed to aid aircraft to land in bad weather The amount provided for the various works in the past two years has been fully utilized and the progress is well up to schedule

A further step was taken in the reorganization and development of air services by the passing of the Air Corporation Act, 1953 This provides for the setting up of two corporations one for long distance international air services and the other for internal air services and for services to neighbouring countries As a result of the Act two corporations namely Air India International and Indian Air Lines were established on June 15 1953

CHAPTER VI

SHIPPING

WITH a coastline stretching nearly 3 500 miles and with five major ports India accounts for a total coastal and over seas trade of about 32 million tons a year Her coastal vessels carry about 2 million passengers a year while about 200 000 pas engers travel annually by Indian ships With such a vast marine trade there is ample scope for the expan sion of Indian shipping

However the total Indian tonnage is still very small in relation to the size of the country the extent of her coast line and her strategic position athwart one of the world s main sea routes At the outbreak of World War II India possessed not more than 30 ships with a total gross tonnage of less than 150 000 Her share in the world tonnage is thus below 0 5 per cent while in the overseas trade it is 2 5 per cent

The Shipping Policy Committee of 1947 had recom mended that India s total tonnage should be raised to 2 million tons during the next five to seven year It has not been possible however to achieve this target In 1949 the actual Indian owned tonnage was 343 000 tons It rose to 362 150 tons in 1950 390 307 tons in 1951 and 4[illegible]2 000 tons in 1953 More than half the fleet however is over 20 years of age

EXPANSION PROGRAMME

Apart from the replacement of obsolete ships it is also

proposed to reserve coastal trade for Indian vessels and to encourage the bulk of the overseas trade to be carried in Indian bottoms

Accordingly, the Five Year Plan aims at raising the total gross tonnage from 390,000 to about 600,000 during 1951-56 At the end of the period of the Plan the tonnage for coastal trade will thus be about 315,000 gross tons and for overseas trade 283,600 gross tons

Coastal Shipping—The shipping companies will be assisted under the Plan to replace their obsolete tonnage employed on the coastal trade To this end, the Central Government have provided Rs 4 51 crore for ships to be built at the Visakhapatnam shipyard It is expected that 100 000 gross tons will become available from this source during the period of the Plan About 60,000 gross tons of this total will be used for the replacement of obsolete tonnage The balance will provide additional tonnage for the coastal trade

The total tonnage required for the coastal trade, however is estimated at 300,000 gross tons With a provision of Rs 4 crore for loans to the shipping companies and an additional Rs 2 crore to be raised by the shipping companies themselves it is expected that a substantial portion of the necessary tonnage will be acquired

Overseas Shipping—The minimum requirements of additional shipping for the overseas trade has been placed at 70 000 gross tons This will be acquired from a loan of Rs 6 5 crore to be granted by the Government to the shipping companies at a lower rate of interest and on payment on instalment basis An additional 40 000 gross tons will be required by the Eastern Shipping Corporation for overseas trade for which the Central Government will contribute Rs 4 4 crore

Sailing Vessels—A substantial volume of cargo is still carried in sailing vessels It is estimated that about 2 600 sailing vessels of approximately 150 000 tons carry nearly a million and a half tons of cargo every year The capital

outlay is estimated at Rs 4 crore and the vessels employ about 40 000 men

Considering the scope and the need for the expansion of the fleet of sailing vessels for coastal trade the Planning Commission has recommended a reorganization of the sailing vessel industry on a rational basis The Ministry of Transport has appointed a special officer to formulate measures for the improvement and rehabilitation of the sailing vessel industry This officer has organized an association of sailing vessels and has prepared a draft bill to regulate the industry

Furthermore the Plan recommends that the transport of certain commodities be reserved for sailing vessels and the railways and coastal shipping be co ordinated for traffic purposes The object is to utilize the various transport services to the best possible advantage

Technical Training—The importance of technical training for officers and crew has received due recognition Accordingly the Plan provides Rs 1 10 crore for the training of engineers and ratings for the merchant navy

ACHIEVEMENTS

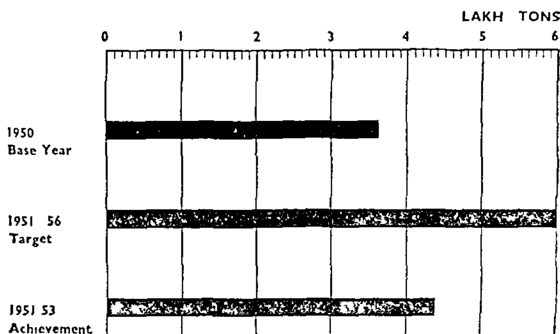
During 1951 53 Indian shipping made steady progress in all directions Thirty one ships with a gross tonnage of 107 000 have been acquired by the shipping companies and these include ix ships built at Visakhapatnam At the same time six ships with a gross tonnage of 29 000 were sold during the two years and one ship of 1 000 gross tons was lost Thus the net addition was of the order of 77 000 gross tons all of which has gone to the coastal trade

The policy of reserving the coastal trade for Indian bottoms was fully carried out India s share in the coastal trade thus rose from about 80 per cent in 1950 51 to 94 per cent in 1951 52 and to almost 100 per cent in 1952 53

Unfortunately no corresponding increase has taken place in overseas tonnage The shipping companies did not take advantage of the Central Government s offer of loan

TOTAL TONNAGE OF INDIAN SHIPPING IN COASTAL AND OVERSEAS TRADE





at the reduced rate of interest of 2½ per cent for the acquisition of additional tonnage for trade abroad This was partly due to sharp fluctuations in the price of ships and freight rate during the period With the negotiations now in progress, it is expected that the provision made in the Plan will be utilized The Eastern Shipping Corporation has however, placed orders with the Hindustan Shipyard for two ships of 8,000 D.W.T and with German shipyard for one ship of nearly 10 000 D.W.T The Corporation is also trying to acquire second hand ships from abroad

CHAPTER VII

PORTS AND HARBOURS

As the gateways of foreign trade and commerce the ports play an important part in the Indian economy Since the loss of Karachi India s foreign trade is now carried on through the five major ports of Calcutta Bombay Madras Cochin and Visakhapatnam There are in addition more than 150 minor ports of varying capacity

At present the annual capacity of the five major ports is about 20 million tons per year excluding petroleum and goods moved by countrycraft and bunkers This is inadequate and the ports are in urgent need of development

There is for instance the need to deal with the consequences of partition in this respect A natural outlet for the traffic previously handled by Karachi had to be found The development of Kandla as a major port was accordingly taken u in 1949 The latter will serve the vast hinterland of the Punjab the north western and central India more economically than Bombay could do by shortening the distance by about 200 miles Its significance for the rehabilitation of displaced persons from Sind must also be kept in mind Up to March 31 1951 a sum of Rs 0 9 crore had been spent on this project

The equipment of the existing ports had been intensively used during World War II and has become antiquated and obsolete The dock systems also need modernization in order to avoid loss arising from the slow turnround of ships

Finally the Standard Vacuum Oil Company and the Burmah Shell Oil Company have signed agreements with

the Government of India to erect petroleum refineries near Bombay These will start functioning by 1955 and will require oil discharge facilities

DEVELOPMENT PROJECTS

The Five Year Plan has earmarked Rs 12 05 crore for the Kandla port, Rs 8 crore for port facilities for the oil refineries and another Rs 15 7 crore for the rehabilitation modernization and expansion of the five major ports A provision of Rs 0 8 crore has also been made for the improvement of minor ports If all the projects are undertaken, the expenditure will amount to Rs 36 55 crore during 1951-56

With the creation of Kandla as a major port its traffic will increase from about 122 000 tons in 1951 to about 850,000 tons per annum from 1956 onwards The restoration of the Garden Reach jetty, the purchase of wagons locomotives and a heavy lift crane for handling heavy machinery and equipment for the river valley projects and the construction of two manual coal berths and one mechanical ore berth are major items for the Calcutta port

For the Bombay port, on the other hand the most important items relate to the modernization of the Prince s and the Victoria Docks, the reconstruction of their transit sheds and the installation of electric cranes at the Alexandra Docks A provision of Rs 3 36 crore has also been made for the housing of labour in Bombay Madras and Calcutta

Besides the less important projects a wet dock and an oil dock for petroleum for Madras are envisaged at a cost of Rs 2 25 crore and Rs 35 lakh respectively The development of the Butcher Island comprises the construction of a pier an approach treastle and five pipe lines

The finances for port development will be found by (i) drawing up on the existing reserves of the ports, (ii) increasing port charges, and (iii) loans from the Central Government

Apart from the Kandla port to be financed wholly by the Central Government, Rs 24 30 crore will be spent on

other ports To this amount the port authorities will *contribute a maximum of Rs 8 6 crore The latter will thus* need assistance to the extent of Rs 15 70 crore for all their projects Under the Plan the Central Government will advance Rs 15 7 crore to the port authorities during the five years besides accepting liability for the creation of port facilities for the oil refineries at a total cost of Rs 8 crore

ACHIEVEMENTS

The progress in the implementation of the programme for the development of ports and harbours has been slow The reason is that a substantial part of the expenditure is to be spent on acquiring equipment and a lot of preliminary work has to be done before orders could be placed

Bombay—The Bombay port authorities had spent during the period ending March 31 1953 Rs 67 lakh as against the total provision of Rs 848 lakh for the period of the Plan Out of this amount nearly Rs 61 lakh were for the reconstruction of transit sheds and warehouses and Rs 3 40 lakh for the housing of labour The modernization of the Prince s Dock and the Victoria Dock as well as the electrification of the Alexandra Docks was undertaken The scheme for the marine oil terminal has also been taken up for execution

Calcutta—The Calcutta port authorities incurred in the same period an expenditure of Rs 2 59 lakh on the approved programme as against Rs 967 5 lakh for 1951 56 The proposals have been finalized for the purchase of wagons locomotives tugs and river survey vessels Plans and estimates have been prepared for a number of other works which have since reached the stage of execution

Madras—During 1952 53 the Madras port authorities spent Rs 17 39 lakh on the programme as against Rs 366 71 lakh for the five year period The wet dock scheme has been taken in hand

Cochin—The Cochin port authorities spent in these two years Rs 3 88 lakh as against Rs 148 5 lakh for the entire period of the Plan The construction of the coal

berth and the warehouse has been completed and the road projects are nearing completion The preliminary work on the other projects is also under way

Much of the preparatory work at Kandla is now complete and that on the main harbour has been taken up A colony for the staff consisting of 228 houses has been built The expenditure incurred on this is about Rs 2 14 crore during the first two years

A sum of Rs 13 4 lakh has also been provided in the Five Year Plan for the improvement and efficient maintenance of the ports in Kutch At the same time loans to the extent of Rs 2 lakh were granted in 1951-52 for development works A further loan of Rs 3 5 lakh was provided for 1953 54 The development works so far completed include the link road between Mundra town and the new jetty at Bocha Creek and certain other development and repair works at the minor ports The administrative set-up for these ports has also been reorganized, while a hydrographic survey of the Gulf of Kutch is in progress

The Government of Bombay have set up an organization of their own for the marine survey of the State's minor ports The services of an expert have been obtained under the U N Technical Assistance Administration for this purpose The Central Government have decided to grant a loan of Rs 20 lakh to the State Government to enable them to take up repair and replacement works at the port of Okha

CHAPTER VIII

LIGHTHOUSES

LIKE the tarred and levelled roads lighthouses not only show and mark the sea ways but also save the ships from danger In ancient days large fires at night and grand pillars during day interspersed on the coastline guided the navigators of the sea to pilot their craft safely Today they have assumed the colourful forms of minarets radiating light and signalling messages to the ever increasing ocean liners freighters barges tugs sailing vessels and motor boats all over the world

The lighthouses are however no longer confined to the shores They have gone right into the seas on submarine bases and floating buoys wherever there is danger to navigation and the ships have to be warned Besides lighthouses there are light towers light vessels buoylight radio beacons radio telephones Decca navigator chains and sound signals The maintenance and improvement of this service is essential to the economy of our country

Moreover the tonnage of ships entering Indian ports is steadily increasing The volume of shipping using Indian sea lanes has also increased nearly three fold A new major port is being constructed at Kandla and several existing ports are being improved With the increase in shipping activity and tonnage accidents are also increasing In 1950 for instance 45 sailing vessels 9 motor boats and 44 steamships with a total of 141 000 tons and in 1951 and 195? four big steamships were involved in accidents The latter caused a loss of over a crore of rupees in cargo alone Thus

both in the interest of the overall economy of the country and of eliminating the risk of accidents the development and improvement of the aids to navigation are very necessary

DEVELOPMENT PLAN

Altogether, there are 1,714 lighthouses in India consisting of shore lights light-vessels, buoylights beacons, etc The Five Year Plan envisages the construction of nearly a hundred new lighthouses and the improvement of many existing ones, the installation of M F radio beacons and V H F trans receiver sets the establishment of two Decca navigator chains on the east and the west coasts the laying of new lightbuoys and the establishment of high and low powered fog signals Moreover it is proposed to bring the existing aids to navigation in conformity with the internationally accepted standards A new life-boat service is also contemplated The total cost of this scheme is estimated to be nearly Rs 5 crore out of which Rs 2 crore are expected to be spent during the period of the Plan

ACHIEVEMENTS

Already, three new lighthouses at Chanka (Saurashtra) Dolphin's Nose (Visakhapatnam) and Koilthottam (Travancore Cochin) have been built Two new large lightbuoys have been laid, one at Ranwara Shoals and the other at Tuna Outer Bar both in the Gulf of Kutch The lighthouse at Madras has also been electrified

Meanwhile the construction of four new major lighthouses has commenced at Bhatkal (Bombay) Perotan Island (Saurashtra) Dolphin s Nose (Visakhapatnam) and Korlai Fort (Bombay) while work on three more lighthouses at Pentakotah (Madras) Okha (Bombay) and Uttain (Bombay) will shortly begin At the same time orders have been placed abroad for the latest and up to date equipment for ten lighthouses

Furthermore the construction of two life-*cum* service boats one for Vengurla Rocks (Bombay) and the other for Oyster Rocks (Bombay) is nearing completion A second hand ship has been purchased costing about Rs 7 lakh for service as a lighthouse tender Negotiations are also proceeding with the Hindustan Shipyard for the construction of a new lighthouse tender at an estimated cost of Rs 40 lakh Finally it is proposed to establish a lighthouse on a submarine base in the Arabian Sea off the Gulf of Kutch Model studies in this connection are being carried out in Sweden under an eminent professor of hydraulics

CHAPTER IX

INLAND WATER TRANSPORT

NAVIGATION does not yet play any significant part in the transport system of India This is largely due to the want of a unified policy and control for the improvement and maintenance of the waterways and for the provision of the necessary facilities for navigation The restrictions imposed on the inter State movement of traffic also impeded its growth Water transport suffered too, because it was treated as a provincial subject

Since the country became independent, the importance of water transport as an auxiliary of railway and road transport has been recognized This is but natural, for textiles food, coal, petroleum and other essential commodities require prompt transport Similarly, an even flow of raw materials is essential for the growth of industries Moreover, the problem of transport is likely to become increasingly difficult as the various schemes under the Five Year Plan are put into execution Thus both in the interest of long range development and of the overall economy of the country, a planned and co ordinated development of cheap water transport has become an urgent necessity

Under the Constitution navigation has consequently become a Central subject and the water resources of the rivers are being tapped on a multi purpose basis This is important because navigation is now difficult in several stretches of the river system inasmuch as the dry weather discharges of the rivers are too small for use even by small country boats

Among the multi purpose projects are included irrigation generation of hydro-electric power and navigation The Central Government are responsible for the control of navigation on inter State rivers and national waterways Already a Central Waterpower Irrigation and Navigation Commission has been set up for this purpose Potential navigable waterways are also proposed to be developed in the States of Assam Bihar Bombay Madhya Pradesh Madras Orissa Uttar Pradesh and West Bengal

At the same time it is proposed to register country boats of ten tons and to certify their river worthiness This will make it possible to improve the country boat services

DEVELOPMENT OF NAVIGATION

The Damodar Valley Project in Bihar and West Bengal envisages the digging of a canal linking the lower Raniganj coal fields with the Hooghly river Similarly the Kakrapar Project in Bombay provides for navigation from the sea face near Surat up to the reservoir of the dam at Kakrapar and 50 miles further inland The construction of the Hirakud Dam in Orissa would make the Mahanadi navigable for 300 miles down to the sea

The Ganga Barrage Project includes the construction of a canal taking off above the barrage and meeting the Bhagirathi near Jangipur This will establish a navigable route from the Bay of Bengal right up to the hinterland of Bihar and Uttar Pradesh This waterway will serve a region which is rich in economic potentialities Apart from linking up the port of Calcutta with the great cities of Bihar and Uttar Pradesh it will help to open up the mineral wealth of the Damodar Valley

This project has also very important strategic advantages It will confine water transport routes to Indian territory whereas now they run for a considerable distance through East Pakistan Further it will add to the economy of transport by reducing the distance between Calcutta and Bihar by nearly 500 miles

The Central Waterpower Irrigation and Navigation Commission is actively considering the revival of water traffic on the other navigable rivers also, for example, on the Ganga from Buxar to Allahabad and on the Ghogra up to Bahram Ghat

The investigations carried out by the CWINC show that it is possible to connect the western and eastern coasts of India by inland navigation channels, such as dams weirs and locks on the Narmada the Rihand, the Sone and the Ganga

ACHIEVEMENTS

Already a number of surveys and investigations have been carried out to devise measures for the improvement of navigation An important event for inland water transport was the setting up of the Ganga-Brahmaputra Water Transport Board for co-ordinating the activities of the State Governments in this respect At its two meetings held in 1952-53 the Board discussed the situation created by the floods in Assam and stressed the need for undertaking remedial measures to control and train the river at suitable points It decided to give high priority to the pilot project for towing barges on the shallow stretches of the river Ganga with flat-bottomed tugs The services of an expert Mr J J Surie, were obtained from the United Nations to prepare details for the pilot project

Meanwhile, the Central Government and the Government of Travancore Cochin have discussed a proposal to form a Water Transport Board in South India to cover the backwaters of Travancore Cochin The State Government have agreed to make an annual contribution of Rs one lakh and the Government of India Rs 2 lakh during 1953 54 to the funds of the proposed Board

CHAPTER X

CONCLUSION

It is clear that the progress in the development of transport during the first half of the period of the Plan has been quite substantial The rehabilitation and development of the railways have been proceeding satisfactorily the construction of new roads and the improvement of the existing ones have been according to schedule and it is hoped the expansion programme for shipping too would be completed within the stipulated period

However the problem of transport is still acute and much leeway has to be made up to meet the country s requirements With the progressive implementation of the various schemes under the Plan the role of transport in planned development is being gradually realized Increased productive activities in agriculture and industry have put added strain especially on the railways

It becomes necessary therefore to reassess the country s transport requirements and consider ways and means of meeting them The Planning Commission has accordingly held consultations with the State Governments and the various aspects of the problem are being studied on an inter departmental basis It is hoped that after the completion of the studies it would be possible to evolve a balanced and co-ordinated policy for the growth and development of the transport system in the country